Active

25 April 1960

STATINTL

[redacted]
P. O. Box 974
Washington 4, D. C.

Subject: Monthly Report - Rectifier Project, T. O. 2

Enclosures: (1) Report of Technical Progress
(2) Estimated Cost Status
(3) Work Schedule and Progress Chart
(4) Phase Diagrams for Reader, Printer and Control Console

Gentlemen:

Enclosed herewith is the report of technical progress on the photographic rectifier for the month of March 1960.

A copy of this report is being submitted directly to the Contracting Officer.

Very truly yours,

[redacted]

STATINTL

Contract Administrator

HRE/pb

cc: Contracting Officer

1 April 1960

PHOTOGRAPHIC RECTIFIER

Report of Technical Progress

STATINTL

Overall design of the rectifier has progressed as anticipated during the reporting period, however, a rather serious problem has arisen which had not been visualized.

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In the previous report it was indicated that the [redacted] Inductosyn had been selected as a substitute for the film index transducer and was scheduled for delivery about the middle of March. Late in the month [redacted] informed us they could not supply the Inductosyn to our specifications which was contrary to what they had originally assured us would be possible. Subsequently, an agreement has been reached that a modified version of this unit will be acceptable, but a considerable delay in delivery is now anticipated with no firm delivery promised. Since the Inductosyn is necessary to test related circuitry in the Control Console, it is felt that the net result may be an extension in engineering time and resultant increased costs. A better estimate of the total effects of this delay will be available for the next report. STATINTL

Computing transformers and amplifiers have been delivered by [redacted] Two transformers have improper turn ratio. Compensating networks are being designed to circumvent this problem. The assignment of a new engineer to the entire Film Index Servo package should expedite this design.

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Although minor problems are being encountered periodically, design appears to be advancing quite satisfactorily in most areas. The [redacted] f/2 lenses discussed in the last report have been ordered and should be delivered in July or August. Mention was made previously that a magnetic memory might be used in the automatic dodging circuitry for storage of dodging data on retrace, however, since this time a capacitor memory has been designed into the circuitry which serves the function.

Assembly of the digital circuit boards has fallen behind slightly as a result of the difficulty in being able to estimate the complexity of these units prior to design. Twelve circuit boards are employed per unit, each requiring (3) three man weeks assembly time. Personnel are presently being transferred from our main production plant and it is expected that the circuit boards for the first unit can be completed by the end of April. Final testing of the digital circuitry design cannot be completed until these units are available.

The sweep amplifier design for the Phototransmission System was completed during March. Video amplifier design is in progress and should be breadboarded by the latter part of April which will permit final sub-system testing to be accomplished.

Testing of the scan computer has been completed to assure design and reliability. The scan comparator is ready for testing but cannot be qualified until assembly of the digital circuit boards discussed above has been completed. These tests will require approximately two weeks.

Enclosure (1)

The preliminary design for calibration reticles has been established. However, before this design is made final, it will be submitted to the customer for review.

Design of the external tape programming system has been delayed pending receipt of the Inductosyn discussed earlier and establishment of its coding requirements. This is desirable to keep the related circuitry as simple as possible. Design of the internal program control system should be completed by the end of April.

In the last report it was indicated that assembly of the reader should be completed by the end of March. However, as in the other instances, failure to receive the Inductosyn has delayed completion of this effort. It is hoped that assembly of both the reader and printer will be completed by the end of April. Control Console design should be completed according to schedule if the Inductosyn delivery is not further extended.

Enclosure (3) shows the anticipated effect of the problems discussed above on the delivery schedule. At present no change is expected in delivery of units 2, 3, and 4.

[redacted] STATINTL
System Manager

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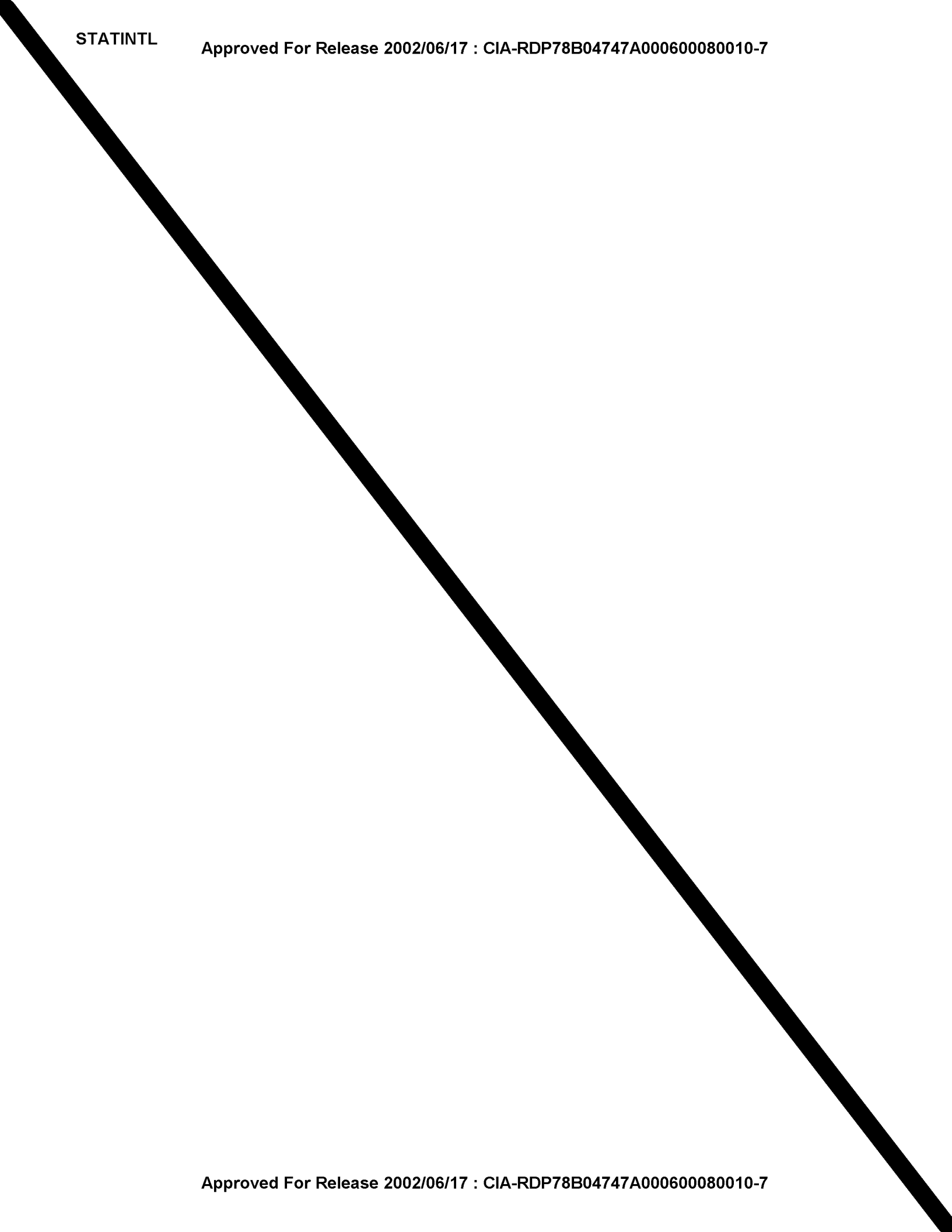
[redacted] 3 May 60
delivery now June 60.
July 1 est. comp date 1st unit
will cut estimated time & money increases.

STATINTL [redacted] estimated increase per inst., as of April visit to Hycon) date
4 May 60

Enclosure (1)
2/2



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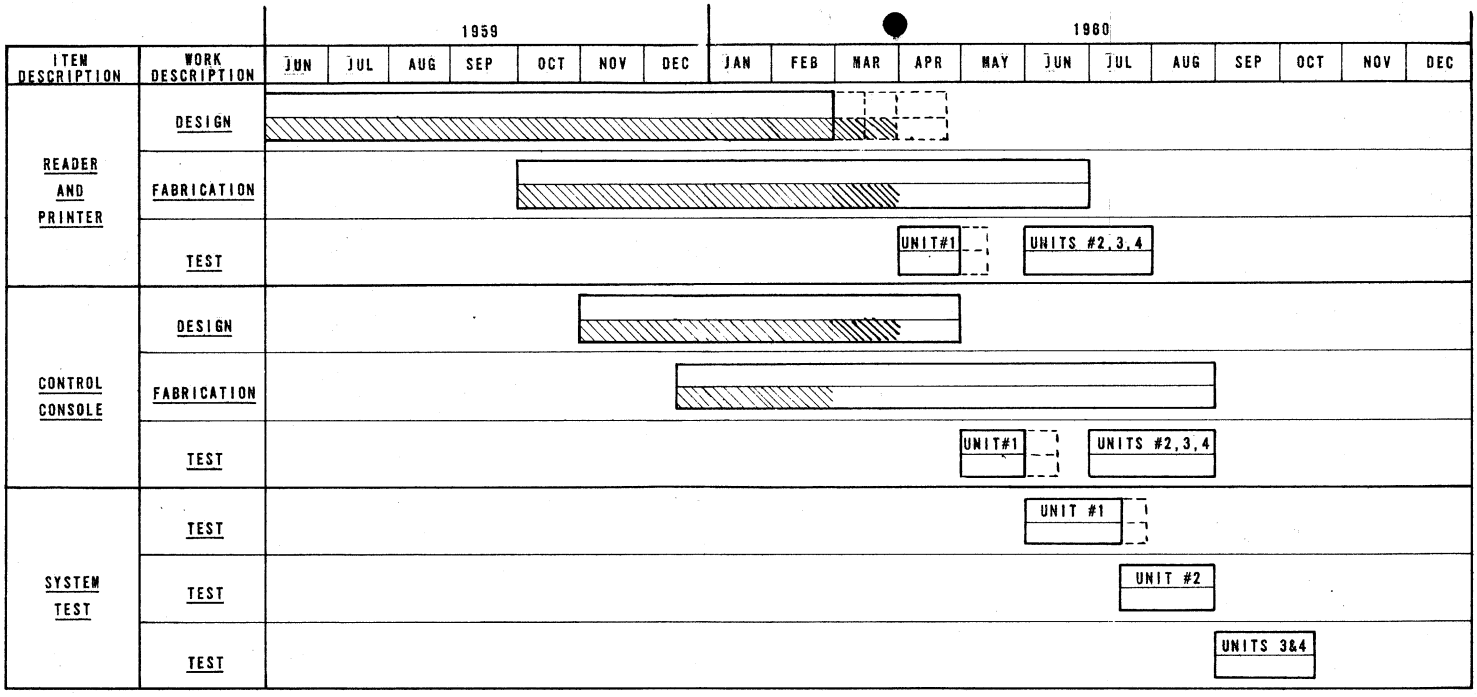
PHOTOGRAPHIC RECTIFIER-PRINTER
WORK SCHEDULE AND PROGRESS CHART



PHASE DIAGRAM FOR READER

ASSEMBLY	PRE DESIGN	DESIGN COMPLETE	RELEASED	PURCHASED PARTS	FABRICATION	ASSEMBLY	TEST AND REMARKS
Structure	Complete	Complete	Complete	Complete	One Complete	In Work	
C.R.T. Housing	Complete	Complete	Complete	Complete	One Complete	One Complete	
C.R.T. Elect. Parts	Complete	Complete		One Complete	One Complete	One Complete	
Track Assembly - X Drive	Complete	Complete	One Complete	Complete	One Complete	In Work	
Lead Screw	Complete	Complete		One Complete	One Complete	Complete	
P.M.T. Drive & Servo	Complete	Complete	Complete	One Complete	One Complete	In Work	
Platen and Index Assembly	Complete	Complete	One Complete	One Complete	One Complete	In Work	Reticles and Align. Sys. not complete
Transducer	Complete	In Work		On Order	In Work		
P.M. Assy & Video Amp.	Complete	Complete	Complete	Complete	Complete	One Complete	
Valve - Pneu. and Vac.	Complete	Complete	Complete	Complete	Complete	In Work	
Doors	Complete	Complete	Complete	8 Ordered	Complete	In Work	
X Deflection Amp.	Complete	Schem. Complete 11 Layout Start		Complete	Two Complete		
Y Deflection Amp.	Complete	Schem. Complete 11 Layout Start		Complete	Two Complete	One Complete	
Focus Current Regulator	Complete	Complete	Complete	Complete	One Complete	One Complete	
1 KV. (for P.M.)	Complete	Complete	Complete	One Complete	Complete	One Complete	
20 KV.	Complete	Complete	Complete	Complete	Complete	One Complete	
Optisyn Pre - Amp.	Complete	Complete	Complete	Ordered	Complete	Complete	

PHASE DIAGRAM FOR PRINTER

ASSEMBLY	PRE DESIGN	DESIGN STATUS	RELEASED	PURCHASED PARTS	FABRICATION	ASSEMBLY	TEST AND REMARKS
Structure	Complete	Complete	Complete	Complete	In Work	In Work	
Crt. Housing	Complete	Complete	Complete	In Work	One Complete		
Crt. Elect. Parts	Complete	Complete	In Work	One Complete	One Complete		
Track Assembly - X Drive	Complete	Complete	One Complete	Complete	One Complete	In Work	
Lead Screw					One Complete	Complete	
Drive Assembly - "X"	Complete	Complete	One Complete	Complete	One Complete		
Film Index	Complete	Complete	Complete	Complete	Complete	1 Assembly	
Lens Board	Complete	Complete	Complete	Complete	Complete		
Valve (Pneu & Vac)	Complete	Complete	Complete	Complete	Complete	One Complete	
Platen	Complete	Complete	One Complete	Complete	One Complete	One Complete	
Cassettes	Complete	Complete	Complete	Complete	Two Complete	Two Complete	
Doors	Complete	Complete	Complete	Complete	6 In Work		
Vac. Pump			One Complete				
Focus Current Regulator	Complete	Complete	Complete	Complete	One Complete	One Complete	
20 K.V.	Complete	Complete	Complete	Complete	One Complete		
"X" Defl. Amp.	Complete	Complete		Complete			
"Y" Defl. Amp.	Complete	Complete		Complete			

PHASE DIAGRAM FOR CONSOLE

ASSEMBLY	PRE DESIGN	DESIGN STATUS	RELEASED	PURCHASED PARTS	FABRICATION	ASSEMBLY	TEST AND REMARKS
1. Rack	Complete	Complete	Complete	1 Unit	In Work	In Work	
1. Monitor	Complete	Complete	Ordered				
1. Master Control	Complete	In Work					
1. Sweep Amplifier	Complete	Complete		In Work	In Work	In Work	
1. Transportape	Complete	Complete	Complete	Complete	One Complete	One Complete	
1. Tape Reader	Complete	Complete		1 on hand		In Work	
1. Relay Control Chassis	Complete	In Work		Integral with reader			
1. Program Control	Complete	In Work					
1. Film Index Servo	Complete	In Work		1 Unit			
1. Scan Servo	Complete	In Work		1 Unit			
1. Scan Comparator	Complete	In Work		1 Unit	In Work		
1. Scan Computer	Complete	Complete	Complete	4 Units	One Complete	In Work	
1. Power Supply - 28 VDC	Complete	Complete			2,3,4 In Work	Complete for 1	
2. Power Supply 300V	Complete	Complete		Complete	Complete for one	Complete for 1	
1. Power Supply 125V	Complete	Complete		Complete	Complete for one	Complete for 1	
Cables	Complete	In Work			In Work		